

Search Plan and Results

Question

[What is the relationship between alcohol intake and cognitive decline with age? \(DGAC 2010\)](#)

Date Searched

06/22/09

Inclusion Criteria

- January 1, 1995 to June 22, 2009
- Human subjects
- English language
- International
- *Sample size:* Minimum of 10 subjects per study arm; preference for larger sizes if available
- *Dropout rate:* Less than 20%; preference for smaller dropout rates
- *Ages:* Adults of legal drinking age (21 years and older)
- *Populations:* Healthy, those with elevated chronic disease risk, those diagnosed with the highly prevalent chronic diseases (CHD/CVD, hypertension, type 2 diabetes, osteoporosis, osteopenia and obesity) and those with breast cancer, colon cancer or prostate cancer.

Exclusion Criteria

- Medical treatment or therapy
- Diseased subjects (exceptions noted)
- Hospitalized patients
- Malnourished or third-world populations or disease incidence not relative to US population(e.g., malaria)
- Animal studies
- In vitro studies
- Articles not peer reviewed (websites, magazine articles, Federal reports, etc.)
- Cross-sectional study design.

Search Terms: Search Vocabulary

("Ethanol"[Mesh] OR "Alcohol Drinking"[mesh] OR "Alcoholic Beverages"[Mesh])
AND
"Cognition Disorders"[Mesh]

Electronic Databases

Total hits from all electronic database searches: 320

Total articles identified to review from electronic databases: 37

Articles Identified Via Handsearch or Other Means

Summary of Articles Identified to Review

Number of Primary Articles Identified: 7

Number of Review Articles Identified: 1

Total Number of Articles Identified: 8

Number of Articles Reviewed but Excluded: 29

List of Articles Included for Evidence Analysis

Reviews/Meta-analysis

Peters R, Peters J, Warner J, Beckett N, Bulpitt C. [Alcohol, dementia and cognitive decline in the elderly: a systematic review.](#) *Age Ageing.* 2008 Sep; 37(5): 505-512. Epub 2008 May 16. Review. PMID: 18487267.

Primary Research

Bond GE, Burr RL, McCurry SM, Rice MM, Borenstein AR, Larson EB. [Alcohol and cognitive performance: A longitudinal study of older Japanese Americans. The Kame Project.](#) *The Kame Project. Int Psychogeriatr.* 2005 Dec; 17(4): 653-668. Epub 2005 Sep 27. PMID: 16185373.

Deng J, Zhou DH, Li J, Wang YJ, Gao C, Chen M. [A two-year follow-up study of alcohol consumption and risk of dementia.](#) *Clin Neurol Neurosurg.* 2006 Jun; 108(4): 378-383. Epub 2005 Aug 9. PMID: 16084641.

Mehlig K, Skoog I, Guo X, Schütze M, Gustafson D, Waern M, Ostling S, Björkelund C, Lissner L. [Alcoholic beverages and incidence of dementia: 34-year follow-up of the prospective population study of women in Goteborg.](#) *Am J Epidemiol.* 2008 Mar 15; 167(6): 684-691. Epub 2008 Jan 24. PMID: 18222934.

Ngandu T, Helkala EL, Soininen H, Winblad B, Tuomilehto J, Nissinen A, Kivipelto M. [Alcohol drinking and cognitive functions: findings from the Cardiovascular Risk Factors Aging and Dementia \(CAIDE\) Study](#). *Dement Geriatr Cogn Disord*. 2007; 23(3): 140-149. Epub 2006 Dec 14. PMID: 17170526.

Stott DJ, Falconer A, Kerr GD, Murray HM, Trompet S, Westendorp RG, Buckley B, de Craen AJ, Sattar N, Ford I. [Does low to moderate alcohol intake protect against cognitive decline in older people?](#) *J Am Geriatr Soc*. 2008 Dec; 56(12): 2, 217-2, 224. PMID: 19093921.

Wright CB, Elkind MS, Luo X, Paik MC, Sacco RL. [Reported alcohol consumption and cognitive decline: The Northern Manhattan study](#). *Neuroepidemiology*. 2006; 27(4): 201-207. Epub 2006 Oct 16. PMID: 17047373; PMCID: PMC1756459.

List of Excluded Articles with Reason

Excluded Citations	Reason for Exclusion
Anttila T, Helkala EL, Viitanen M, Kåreholt I, Fratiglioni L, Winblad B, Soininen H, Tuomilehto J, Nissinen A, Kivipelto M. Alcohol drinking in middle age and subsequent risk of mild cognitive impairment and dementia in old age: a prospective population based study . <i>BMJ</i> . 2004 Sep 4;329(7465):539. Epub 2004 Aug 10. PMID: 15304383; PMCID: PMC516103.	Primary study cited under Peters et al, 2008 systematic review/meta-analysis.
Brust JC. A 74-year-old man with memory loss and neuropathy who enjoys alcoholic beverages . <i>JAMA</i> . 2008 Mar 5; 299(9): 1, 046-1, 054. Epub 2008 Feb 5. PMID: 18252872.	Only one subject with cognitive impairment.
Christian JC, Reed T, Carmelli D, Page WF, Norton JA Jr, Breitner JC. Self-reported alcohol intake and cognition in aging twins . <i>J Stud Alcohol</i> . 1995 Jul; 56(4): 414-416. PMID: 7674676.	Some subjects were diagnosed as alcoholics.
den Heijer T, Vermeer SE, van Dijk EJ, Prins ND, Koudstaal PJ, van Duijn CM, Hofman A, Breteler MM. Alcohol intake in relation to brain magnetic resonance imaging findings in older persons without dementia . <i>Am J Clin Nutr</i> . 2004 Oct; 80(4): 992-997. PMID: 15447910.	Cross-sectional study.
Espeland MA, Coker LH, Wallace R, Rapp SR, Resnick SM, Limacher M, Powell LH, Messina CR; Women's Health Initiative Study of Cognitive Aging. Association between alcohol intake and domain-specific cognitive function in older women . <i>Neuroepidemiology</i> . 2006; 27(1): 1-12. Epub 2006 May 24. PMID: 16717476.	Included in Peters et al, 2008 systematic review.

<p>Espeland MA, Gu L, Masaki KH, Langer RD, Coker LH, Stefanick ML, Ockene J, Rapp SR. Association between reported alcohol intake and cognition: Results from the Women's Health Initiative Memory Study. <i>Am J Epidemiol.</i> 2005 Feb 1; 161(3): 228-238. PMID: 15671255.</p>	<p>Primary study cited under Peters et al, 2008 systematic review/meta-analysis.</p>
<p>Ganguli M, Vander Bilt J, Saxton JA, Shen C, Dodge HH. Alcohol consumption and cognitive function in late life: A longitudinal community study. <i>Neurology</i>. 2005 Oct 25; 65(8): 1, 210-1, 217. PMID: 16247047.</p>	<p>Primary study cited under Peters et al, 2008 systematic review/meta-analysis.</p>
<p>González-Muñoz MJ, Peña A, Meseguer I. Role of beer as a possible protective factor in preventing Alzheimer's disease. <i>Food Chem Toxicol.</i> 2008 Jan; 46(1): 49-56. Epub 2007 Jul 7. PMID: 17697731.</p>	<p>Cross-sectional study.</p>
<p>Huang W, Qiu C, Winblad B, Fratiglioni L. Alcohol consumption and incidence of dementia in a community sample aged 75 years and older. <i>J Clin Epidemiol.</i> 2002 Oct; 55(10): 959-964. PMID: 12464371.</p>	<p>Primary study cited under Peters et al, 2008 systematic review/meta-analysis.</p>
<p>Järvenpää T, Rinne JO, Koskenvuo M, Räihä I, Kaprio J. Binge drinking in midlife and dementia risk. <i>Epidemiology</i>. 2005 Nov; 16(6): 766-771. PMID: 16222166.</p>	<p>Primary study cited under Peters et al, 2008 systematic review/meta-analysis.</p>
<p>Kasahara H, Karasawa A, Ariyasu T, Thukahara T, Satou J, Ushijima S. Alcohol dementia and alcohol delirium in aged alcoholics. <i>Psychiatry Clin Neurosci</i>. 1996 Jun; 50(3): 115-123. PMID: 9201756.</p>	<p>Study population is alcoholics.</p>
<p>Leibovici D, Ritchie K, Ledésert B, Touchon J. The effects of wine and tobacco consumption on cognitive performance in the elderly: A longitudinal study of relative risk. <i>Int J Epidemiol.</i> 1999 Feb; 28(1): 77-81. PMID: 10195668.</p>	<p>Primary study cited under Peters et al, 2008 systematic review/meta-analysis.</p>
<p>Lemeshow S, Letenneur L, Dartigues JF, Lafont S, Orgogozo JM, Commenges D. Illustration of analysis taking into account complex survey considerations: the association between wine consumption and dementia in the PAQUID study. <i>Personnes Ages Quid</i>. <i>Am J Epidemiol.</i> 1998 Aug 1; 148(3): 298-306. PMID: 9690368.</p>	<p>Does not address the question. Looks at statistical software packages to best analyze data.</p>
<p>Leroi I, Sheppard JM, Lyketsos CG. Cognitive function after 11.5 years of alcohol use: relation to alcohol use. <i>Am J Epidemiol.</i> 2002 Oct 15; 156(8): 747-752. PMID: 12370163.</p>	<p>Primary study cited under Peters et al, 2008 systematic review/meta-analysis.</p>

<p>Luchsinger JA, Tang MX, Siddiqui M, Shea S, Mayeux R. Alcohol intake and risk of dementia. <i>J Am Geriatr Soc</i>. 2004 Apr; 52(4): 540-546. PMID: 15066068.</p>	<p>Included in Peters et al, 2008 systematic review.</p>
<p>McDougall GJ Jr, Becker H, Areheart KL. Older males, cognitive function, and alcohol consumption. <i>Issues Ment Health Nurs</i>. 2006 May; 27(4): 337-353. PMID: 16546934; PMCID: PMC2535769.</p>	<p>Cross-sectional study.</p>
<p>Mukamal KJ, Kuller LH, Fitzpatrick AL, Longstreth WT Jr, Mittleman MA, Siscovick DS. Prospective study of alcohol consumption and risk of dementia in older adults. <i>JAMA</i>. 2003 Mar 19; 289(11): 1, 405-1, 413. PMID: 12636463.</p>	<p>Primary study cited under Peters et al, 2008 systematic review/meta-analysis.</p>
<p>Müller-Thomsen T, Haasen C. Alcohol consumption in Alzheimer's disease. A case report. <i>Eur Addict Res</i>. 2003 Jan; 9(1): 51-52. PMID: 12566798.</p>	<p>Subjects diagnosed with Alzheimer's disease.</p>
<p>Orgogozo JM, Dartigues JF, Lafont S, Letenneur L, Commenges D, Salamon R, Renaud S, Breteler MB. Wine consumption and dementia in the elderly: A prospective community study in the Bordeaux area. <i>Rev Neurol (Paris)</i>. 1997 Apr; 153(3): 185-192. PMID: 9296132.</p>	<p>Primary study cited under Peters et al, 2008 systematic review/meta-analysis.</p>
<p>Panza F, Capurso C, D'Introno A, Colacicco AM, Frisardi V, Santamato A, Ranieri M, Fiore P, Vendemiale G, Seripa D, Pilotto A, Capurso A, Solfrizzi V. Vascular risk factors, alcohol intake, and cognitive decline. <i>J Nutr Health Aging</i>. 2008 Jun-Jul; 12(6): 376-381. Review. PMID: 18548174.</p>	<p>Narrative review.</p>
<p>Piguet O, Cramsie J, Bennett HP, Kril JJ, Lye TC, Corbett AJ, Hayes M, Creasey H, Broe GA. Contributions of age and alcohol consumption to cerebellar integrity, gait and cognition in non-demented very old individuals. <i>Eur Arch Psychiatry Clin Neurosci</i>. 2006 Dec; 256(8): 504-511. Epub 2006 Aug 17. PMID: 16917683.</p>	<p>Cross-sectional study.</p>
<p>Red wine might prevent Alzheimer's disease. Moderate consumption could be a factor in reducing or slowing the incidence of AD. <i>Health News</i>. 2007 Jan; 13(1): 7-8. PMID: 17299887.</p>	<p>Not peer-reviewed; article.</p>
<p>Reid MC, Maciejewski PK, Hawkins KA, Bogardus ST Jr. Relationship between alcohol consumption and Folstein mini-mental status examination scores among older cognitively impaired adults. <i>J Geriatr Psychiatry Neurol</i>. 2002 Spring; 15(1): 31-37. PMID: 11936241.</p>	<p>Subjects were cognitively-impaired adults.</p>

<p>Rozzini R, Trabucchi M. Re: "Association between reported alcohol intake and cognition: Results from the Women's Health Initiative Memory Study". <i>Am J Epidemiol.</i> 2005 Aug 1; 162(3): 294-295; author reply 295-296. Epub 2005 Jun 29. PMID: 15987726.</p>	<p>Letter to the editor.</p>
<p>Ruitenberg A, van Swieten JC, Witteman JC, Mehta KM, van Duijn CM, Hofman A, Breteler MM. Alcohol consumption and risk of dementia: The Rotterdam Study. <i>Lancet.</i> 2002 Jan 26; 359(9, 303): 281-286. PMID: 11830193.</p>	<p>Primary study cited under Peters et al, 2008 systematic review/meta-analysis.</p>
<p>Stampfer MJ, Kang JH, Chen J, Cherry R, Grodstein F. Effects of moderate alcohol consumption on cognitive function in women. <i>N Engl J Med.</i> 2005 Jan 20; 352(3): 245-253. PMID: 15659724.</p>	<p>Primary study cited under Peters et al, 2008 systematic review/meta-analysis.</p>
<p>Truelsen T, Thudium D, Grønbaek M; Copenhagen City Heart Study. Amount and type of alcohol and risk of dementia: The Copenhagen City Heart Study. <i>Neurology.</i> 2002 Nov 12; 59(9): 1, 313-1, 319. PMID: 12427876.</p>	<p>Primary study cited under Peters et al, 2008 systematic review/meta-analysis.</p>
<p>Xu G, Liu X, Yin Q, Zhu W, Zhang R, Fan X. Alcohol consumption and transition of mild cognitive impairment to dementia. <i>Psychiatry Clin Neurosci.</i> 2009 Feb; 63(1): 43-49. PMID: 19154211.</p>	<p>Subjects studied had suspected cognitive impairment.</p>
<p>Zuccalà G, Onder G, Pedone C, Cesari M, Landi F, Bernabei R, Cocchi A; Gruppo Italiano di Farmacoepidemiologia nell'Anziano Investigators. Dose-related impact of alcohol consumption on cognitive function in advanced age. <i>Alcohol Clin Exp Res.</i> 2001 Dec; 25(12): 1, 743-1, 748. PMID: 11781507. Results of a multicenter survey.</p>	<p>Cross-sectional study.</p>